

# PATENT ABSTRACTS OF JAPAN

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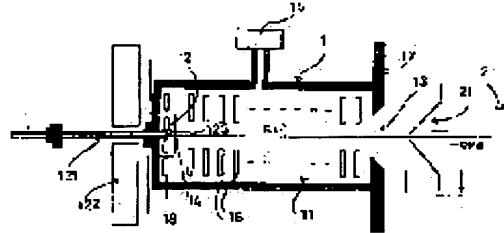
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## (54) METHOD AND DEVICE FOR SENSING OF NEUTRAL ACTIVE SEED

### (57)Abstract:

**PURPOSE:** To provide sensibility for neutral active seed with a high sensitivity by adding a neutral active seed to one-valent or two-valent metal ions, and sensing these added ions by mass-spectrometry.

**CONSTITUTION:** To produce radicals from methane gas, a quartz discharge tube 121 and a microwave cavity 122 are installed as a neutral active seed introducing part 12 in the reacting area 11 of a reaction chamber 1, and radicals are introduced to the reacting area 11 from an inlet 123. A Li<sup>+</sup> emitter is installed as a metal ion releasing part 14 and emits Li<sup>+</sup> by doping alumino silicate with lithium salt and heating it. Lithium ions Li<sup>+</sup> from this releasing part 14 are allowed to make addition reaction with the radicals and led as added ions RLi<sup>+</sup> to a mass-spectrometric device 2 from a schemer 21 so as to perform sensing and fixation of the radicals (R). Besides Li, one-valent or two-valent metals such as Ag and Cu and alkali metal such as Na, K, etc.



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